ABSTRACT

A method of optimizing latency delays in VoIP and other multimedia communications using IPv6 over the "public" internet and between two end users that involves selecting an optimum VoIP route based upon periodic trace measurements of the best available VoIP routes at the time of VoIP communications and comparison of that information with historic route information between the same two end user destinations. In particular, the method of the present invention employs a dynamic data library which is a modification and addition to the Source Routing header within the NEXT header extension of IPv6 and which works in correlation with the Hop-to-Hop Options header of the NEXT header extension within IPv6. This dynamic data library contains a routing database which contains current best available VoIP route information at the time of the VoIP communication and a destination database which contains historical information concerning best available VoIP routes between particular end user destinations. The destination database can be updated based upon the information gathered in respect in respect to the current VoIP communication which is being measured and analyzed.